R5400

HI-FI RACK SYSTEM

THE COMPONENT MODELS ARE:

MODEL #	PRODUCT
HCD541	PRE-AMP, AMPLIFIER, TUNER, CONTROL CENTER
SSU541AV	STEREO SPEAKERS
SAW541	ACTIVE SUB-WOOFER
SSCR64	SURROUND SPEAKERS
SUS5410	RACK CABINET

PLEASE QUERY AND SELECT THE MANUALS FOR THE COMPONENT MODEL NUMBERS LISTED ABOVE.

SONY

3-758-222-51(1)

Compact Disc Deck Receiver

Operating Instructions

COMPACT disc DIGITAL AUDIO

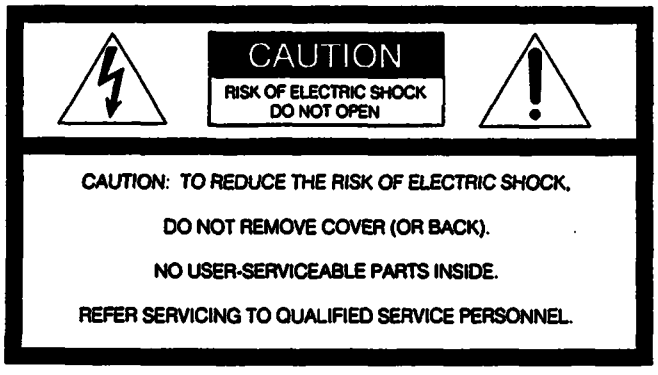
HCD-541

© 1994 by Sony Corporation

WARNING

For the customers in U.S.A.

To prevent fire or shock hazard, do not expose the unit to rain or moisture.


CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Note to CATV system installer
This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

Owner's Record
The model and serial number is located at the rear. Record this serial number in the space provided below. Refer to these numbers whenever you call upon your Sony dealer regarding this product.

HCD-541 Serial No. _____

INFORMATION
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

— Reorient or relocate the receiving antenna.
— Increase the separation between the equipment and receiver.
— Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
— Consult the dealer or an experienced radio/TV technician for help.

CAUTION
You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

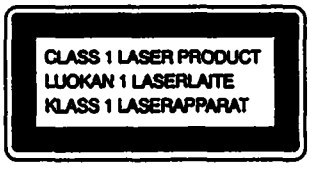
CAUTION
The use of optical instruments with this product will increase eye hazard.

For the customers in other countries

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

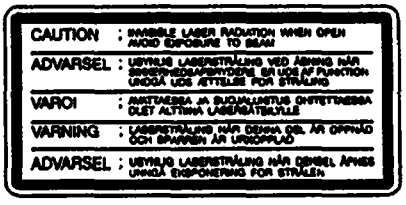
To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.

This appliance is classified as a CLASS 1 LASER product. The CLASS 1 LASER PRODUCT MARKING is located on the rear exterior.



Laser component in this product is capable of emitting radiation exceeding the limit for Class 1.

The following caution label is located inside the unit.



Precautions

This unit is a compact disc deck receiver which consists of a control amplifier, tuner, stereo cassette deck and 5-compact disc player.
Before operating this unit, be careful about the followings.

On safety
- Should any solid object or liquid fall into the unit, unplug it and have it checked by qualified personnel before operating it any further.
- As the laser beam used in this compact disc player is harmful to the eyes, do not attempt to disassemble the cabinet. Refer servicing to qualified personnel only.

On installation
- Place the unit on a level surface.
- Do not install the unit in a location near heat sources such as radiators or air ducts, or in a place subject to direct sunlight, excessive dust, mechanical vibration or shock.
- Do not place anything on top of the cabinet.

On cleaning the cabinet
Clean the cabinet, panel and controls with a soft cloth lightly moistened with mild detergent solution. Do not use any type of abrasive pad, scouring powder or solvent such as alcohol or benzine.

On repacking
Do not throw away the carton and the packing material. It makes an ideal container to transport the unit in.

On moisture condensation
If the unit is brought directly from a cold to a warm location, or is placed in a very damp room, moisture may condense on the lens inside the CD section. Should this occur, the CD section will not operate. In this case, remove the disc and leave the unit turned on for about an hour until the moisture evaporates.

If you have any question or problem concerning your unit, please consult your nearest Sony dealer.

Differences by Model and Area
This instruction manual covers SA-W541/SA-W542 supplied with the HCD-541. The differences among them are as follows.

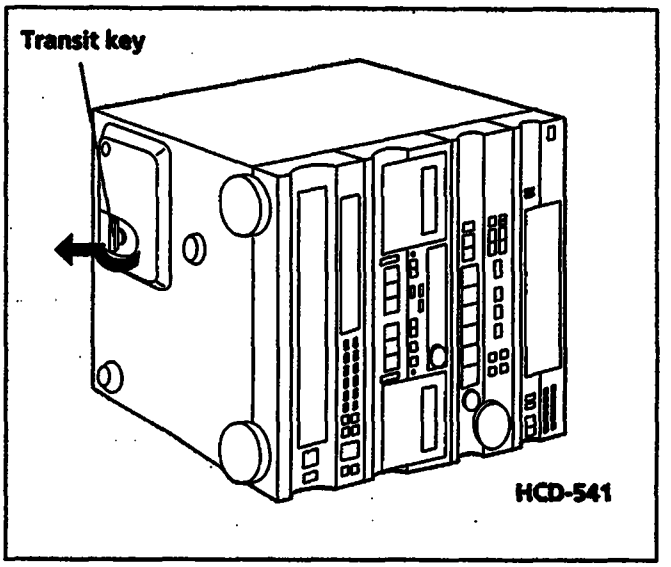
Where purchased	Model
U.S.A.	SA-W541/SA-W542
Other countries	SA-W542

Note on the Transit Key

The transit key on the bottom exterior of the HCD-541 protects the optical system against shock during transportation. Before operating the unit, be sure to remove the key by following the instruction on the label, and store it in a safe place.

When transporting the unit, re-install the key by following the instruction below.

1 Remove all discs from the CD section.
2 Press ⏏ to close the disc tray and wait for "1 (or 2, 3 ...)" to disappear in the display.
3 Turn the power off.
4 Insert the key into its original hole and lock it in place.



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Remote Commander

The remote commander supplied with this unit can control HCD-541 and SA-W541/SA-W542 from a distance.

Battery life

About half a year of normal operation can be expected when using the Sony SUM-3 (NS) batteries. When the batteries are exhausted, the remote commander can no longer operate the unit. If this happens, replace both batteries with new ones.

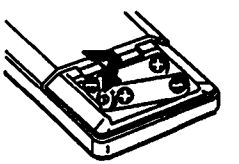
To avoid battery leakage

When the commander is not to be used for a long time, remove the batteries to avoid damage caused by battery leakage and corrosion.

Inserting the batteries into the remote commander

1 Open the cover.

2 Insert two size-AA (R6) batteries with correct polarity.

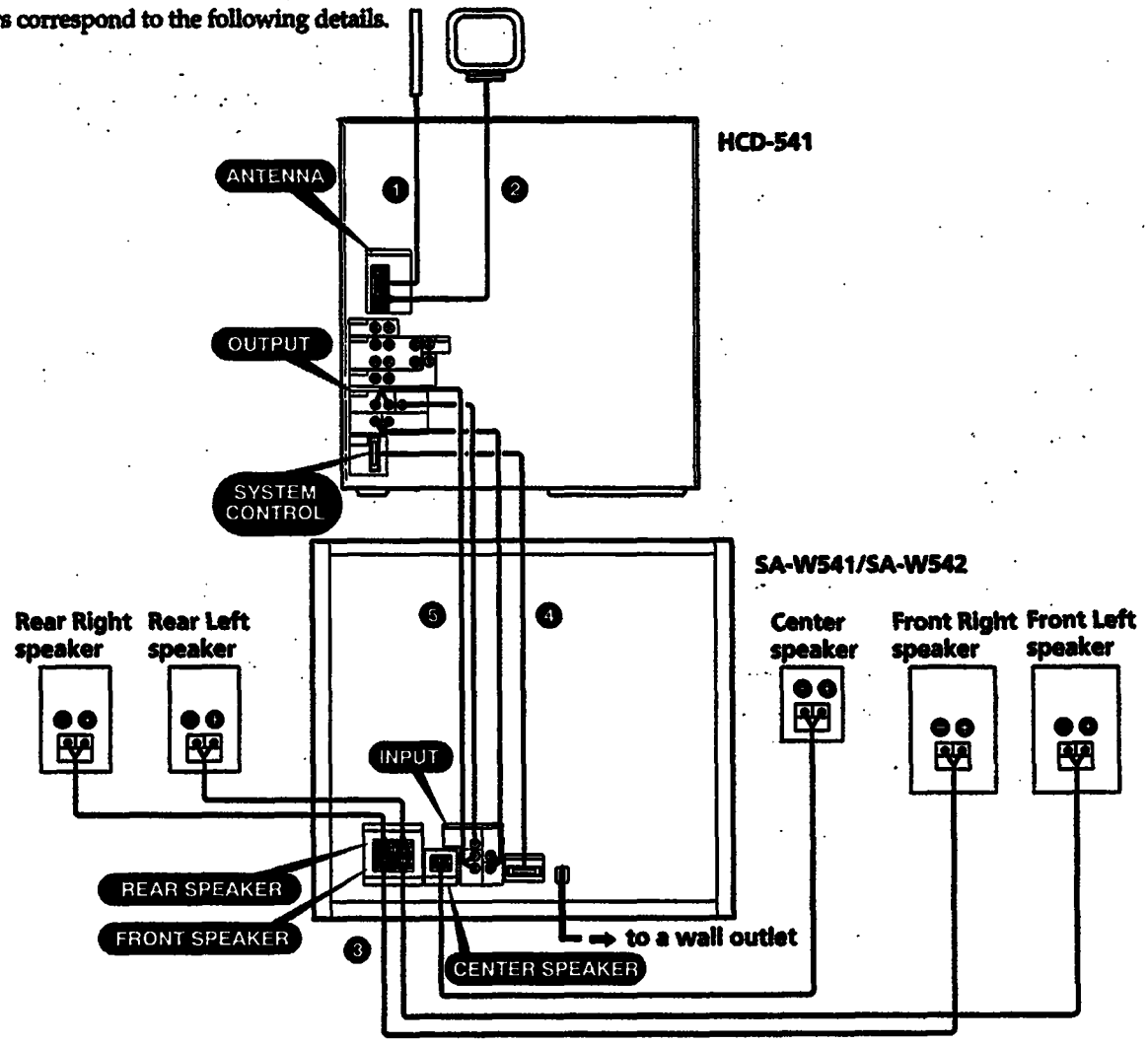


Hooking Up the System

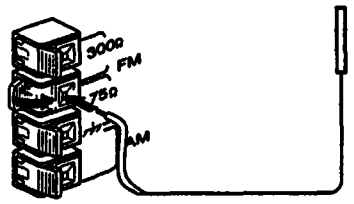
This section describes about the antenna and speaker connections and the system control connections for SA-W541/SA-W542. Also, it shows about the connection with the other audio equipments.

- Connect the AC power cord last. Make sure power is off.
- Cord plugs and jacks are color coded. Red plugs and jacks are for right channel (R) and white ones for the left channel (L). And also, red plugs and jacks are for REAR terminal and white ones for CENTER terminal. Black plugs and jacks are for SUPER WOOFER terminal.
- The cable connectors should be fully inserted into the jacks. A loose connection may cause hum and noise.
- Keep speaker cords, connecting cords and power cords away from the AM loop antenna and the tuner's antenna lead-in to avoid possible noise pickup.

The numbers correspond to the following details.

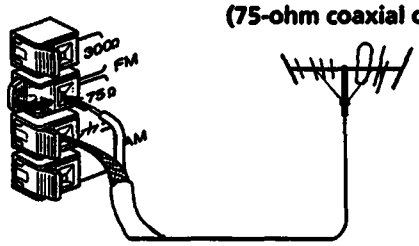


❶ **FM wire antenna (supplied)**



For better FM reception

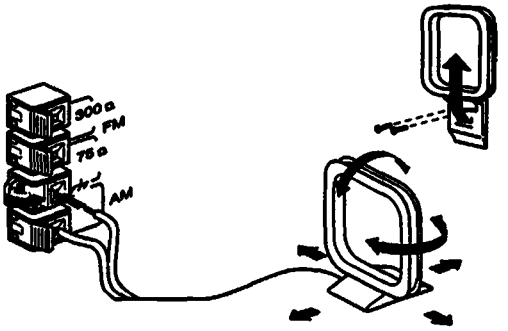
Outdoor FM antenna (75-ohm coaxial cable)



Hooking Up the System

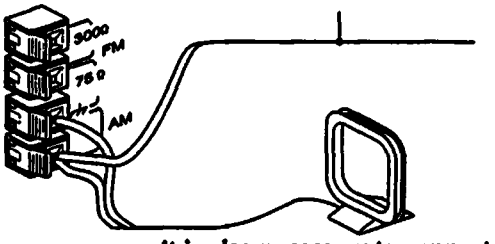
❷ AM loop antenna (supplied)

To attach to a wall



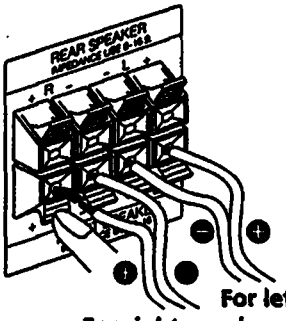
For better AM reception

Extend a 6 to 15-meter insulated wire out of door(s).



It is also necessary to connect the supplied AM loop antenna.

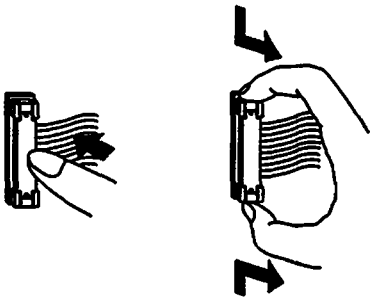
❸ Speaker cords



For left speaker

For right speaker

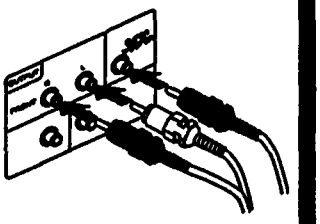
❹ System control cord (Supplied)



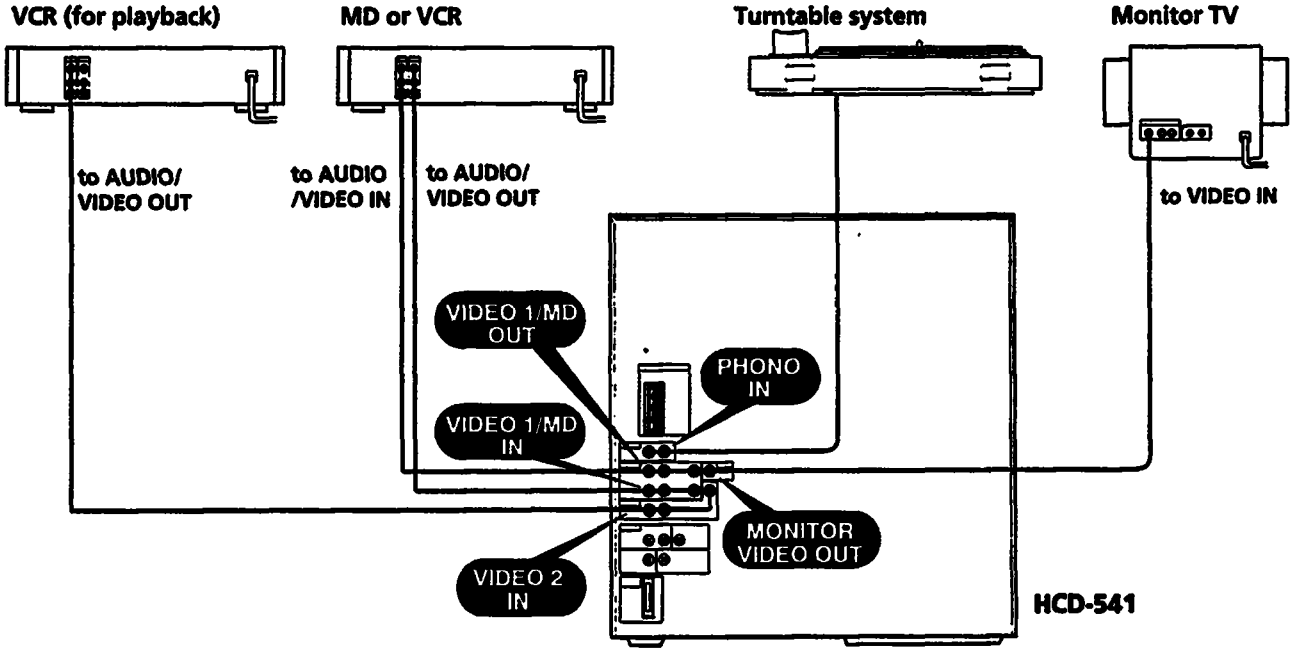
Push in until it clicks

To disconnect, pull out while pressing here

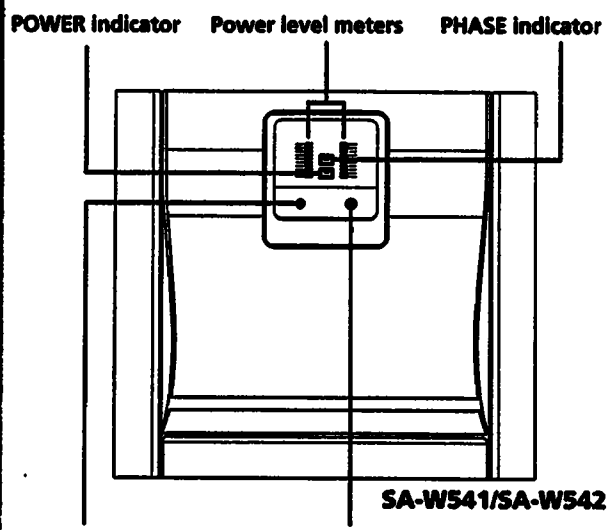
❺ Audio connecting cord (Supplied)

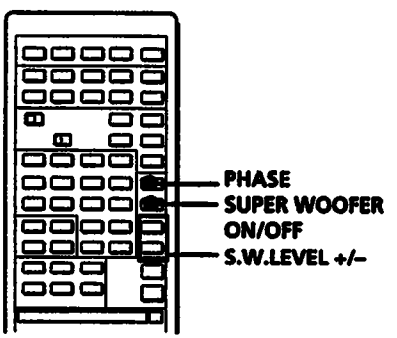


Adding other audio equipments to your system



Setting the Super Woofer





RM-U541

Operating SA-W541/SA-W542

After turning on the unit by pressing SYSTEM POWER, press SUPER WOOFER on HCD-541 or SUPER WOOFER ON/OFF on the remote commander to on.

Selecting the Level Meter

The level meters show the power output level of the left channel and right channel independently.
You can turn off and on the level meters by pressing the LEVEL METER.

Adjusting the Phase

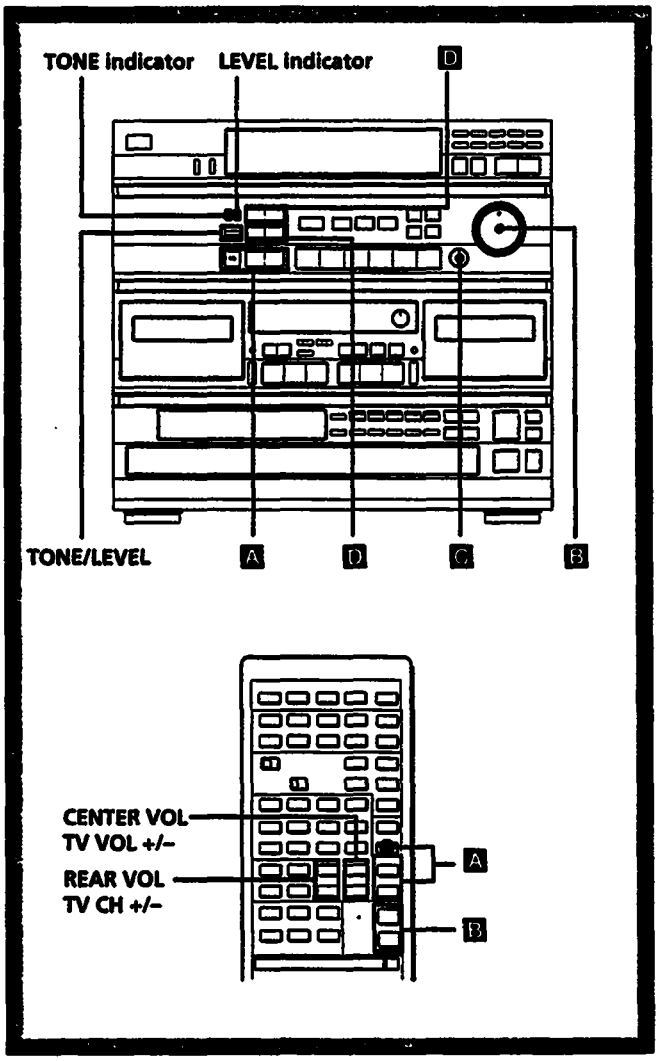
The phase polarity is normal when the PHASE indicator is not lit. However, depending on the speakers combined with this unit and its installation position, the reverse setting may sometimes provide a better bass reproduction. Please select the setting which provides the bass reproduction that suits your preference by pressing PHASE on the remote commander while listening to the sound in your listening position.

For personal listening
Connect headphone to the HEADPHONES jack. No sound is heard from the speakers.

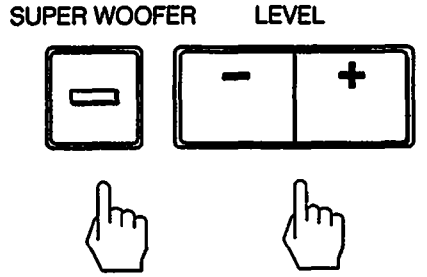
Notes
- The super woofer is automatically turned off in the PHONO mode and it can not be controlled.
- Place the super woofer directly on the floor.
  If your floor is made of wood, to obtain high-quality bass sound, we recommend that you attach the supplied feet to the bottom corners of the super woofer for greater stability.

Adjusting the Audio

The following operations apply only to reproduced sound.

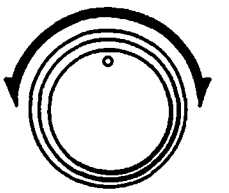


Adjusting the Super Woofer Level [A]



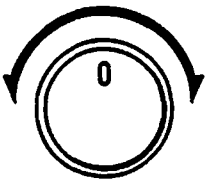
Press SUPER WOOFER so that the indicator lights and press LEVEL – or + to adjust the super woofer level.
The super woofer level is indicated on the display.

Volume Adjustment [B]



To increase the sound level, turn the VOLUME control clockwise.
To decrease it, turn the control counterclockwise.

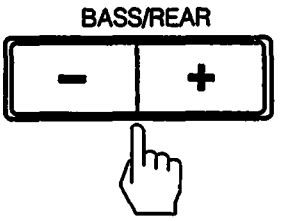
Adjusting Balance [C]



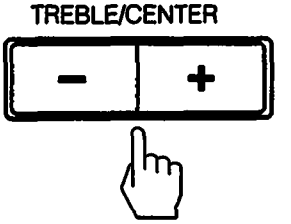
To change relative volume of the right and left speakers, adjust the BALANCE control.

Adjusting the Bass and the Treble Sound [D]

Before adjusting the tone level, press TONE/LEVEL so that the TONE indicator lights.



Press BASS/REAR + to enhance the BASS sound.
Press BASS/REAR – to attenuate the BASS sound.
The adjusted level is indicated on the display.



Press TREBLE/CENTER + to enhance the TREBLE sound.
Press TREBLE/CENTER – to attenuate the TREBLE sound.
The adjusted level is indicated on the display.

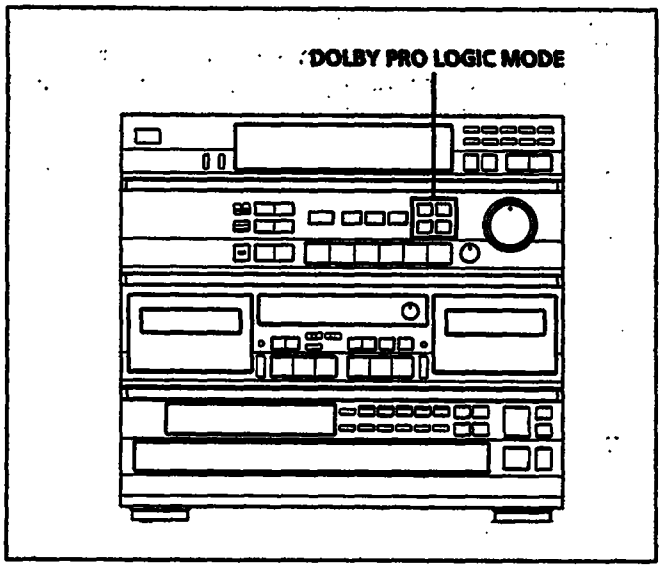
Getting Ready for Dolby Surround Sound

This section describes about selecting the speaker configuration and then adjusting the speaker volume and the delay time of the rear speakers so that you can enjoy the Dolby surround sound.

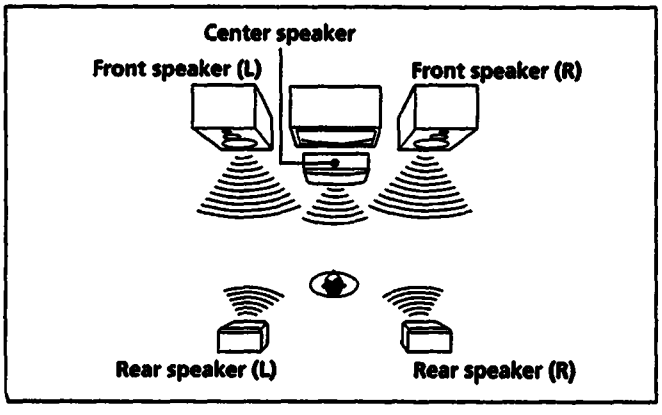
Placement of Speakers and Selecting the PRO LOGIC MODE

The Dolby Pro Logic Surround Decoder has the same functions for playback, such as movie theaters and gives a theater-like experience in your listening room, naturally reproducing the audio sound field.

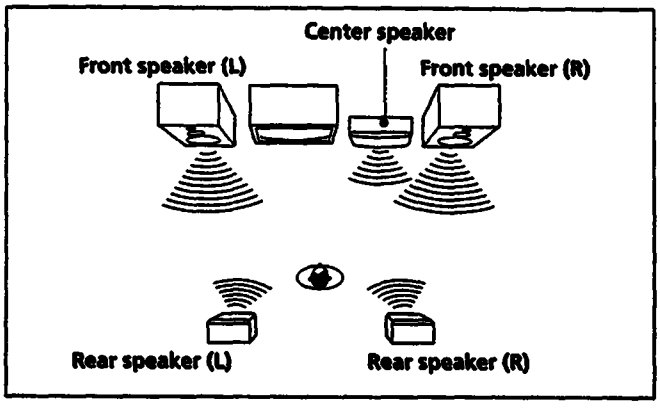
The HCD-541 incorporates a decoder which reproduces the specially encoded surround sound of Dolby surround video programs.
In the Dolby surround mode, select the speaker operation mode according to your speaker configuration by pressing DOLBY PRO LOGIC MODE: NORMAL, WIDE, PHANTOM or 3CH.
With this unit, it is recommended to select NORMAL mode.



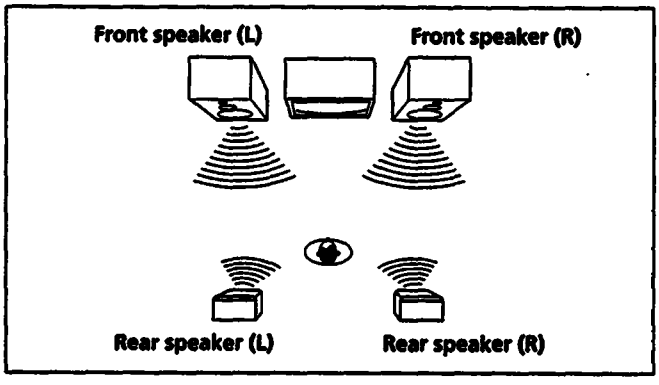
NORMAL mode
Select this mode if you use a small center speaker. The bass sound of the center channel is output from the front speakers, as a small speaker cannot produce enough bass.



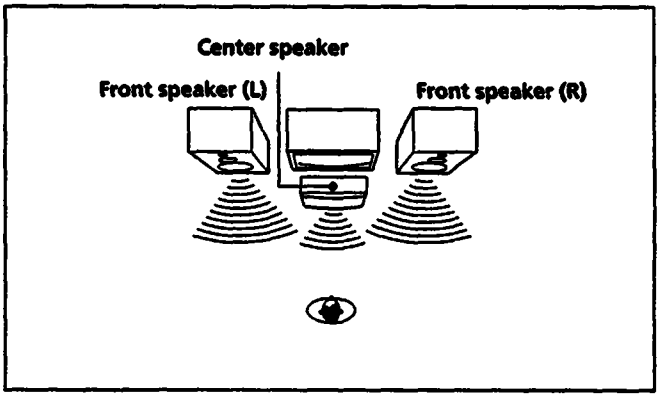
WIDE mode
Select this mode if you use a medium to big center speaker.



PHANTOM mode
Select this mode when you playback a Dolby surround program source without using a center speaker. The sound of the center channel is output from the front (L and R) speakers.



3CH. (Channel) LOGIC mode
Select this mode when you playback a Dolby surround program source only with the front and center speakers. The sound of the rear channel is output from the front (L and R) speakers.

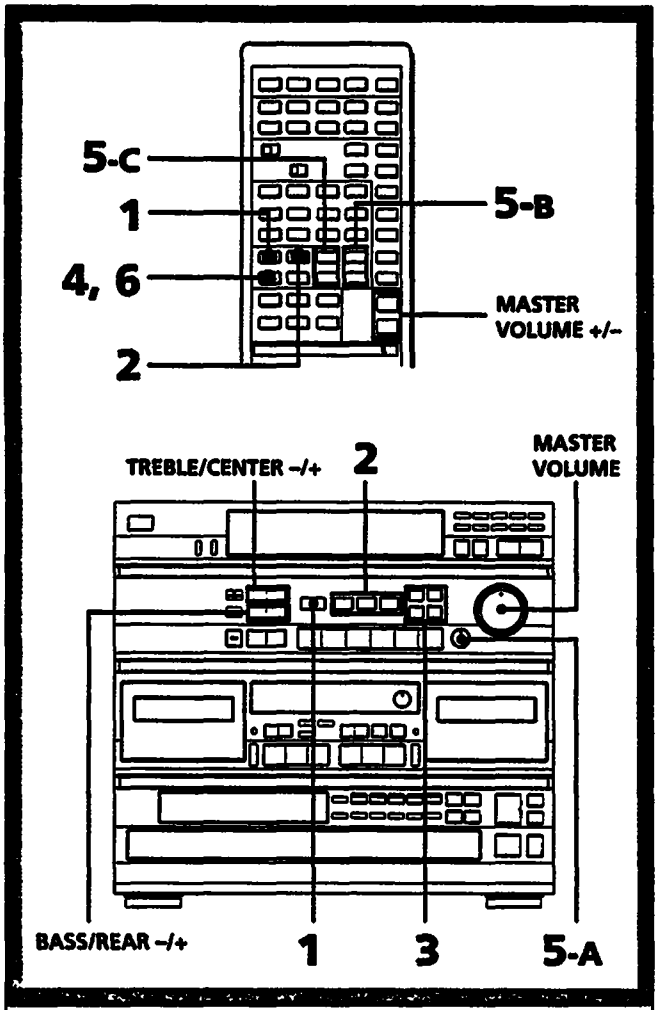


Even for video software which does not carry the DOLBY SURROUND mark
Some commercially available software may have Dolby surround processed sound tracks even though it is not so indicated on the package.

Getting Ready for Dolby Surround Sound

Adjusting the Speaker Volume

To enjoy the surround sound to the maximum on playing any program sources, adjust the front, rear, and center (if connected) speakers to the same volume level. The adjustment must be done with a test tone in the DOLBY SURROUND mode, but the level once adjusted can be used for all surround modes.
You can adjust the volume level from your listening position by using the remote commander.



1 **Press SURROUND ON/OFF to ON.**
"SURROUND ON" and "DOLBY SUR" appear on the display.

2 **Press SURROUND MODE so that "DOLBY SUR" appears on the display.**

3 **Select the Dolby pro logic mode with the DOLBY PRO LOGIC MODE buttons on the main unit according to your speaker system.**
The selected mode is displayed.

4 **Press T.TONE to set to on.**
"TEST TONE" appears on the display and the test tone will be heard from each speaker in the following order.

In NORMAL or WIDE mode:
LEFT(front) → CENTER → RIGHT(front)
↑ REAR(L+R) ←

In PHANTOM mode:
→ FRONT(L+R) →
REAR(L+R) ←

In 3CH mode:
LEFT(front) → CENTER → RIGHT(front)
↑ ←

5 **Adjust the volume level so that the sound from each speaker will be the same level at the listening position.**

A **To adjust the volume balance between the left and right front speakers.**
Rotate BALANCE on the main unit while the sound is heard from the front speakers.

B **To adjust the level of center speaker(s) (except for PHANTOM mode).**
Press CENTER VOL/TV VOL +/–.
The adjusted center level is indicated on the display.

C **To adjust the level of rear speakers (except for 3CH. mode).**
Press REAR VOL/TV CH +/–.
The adjusted rear level is indicated on the display.

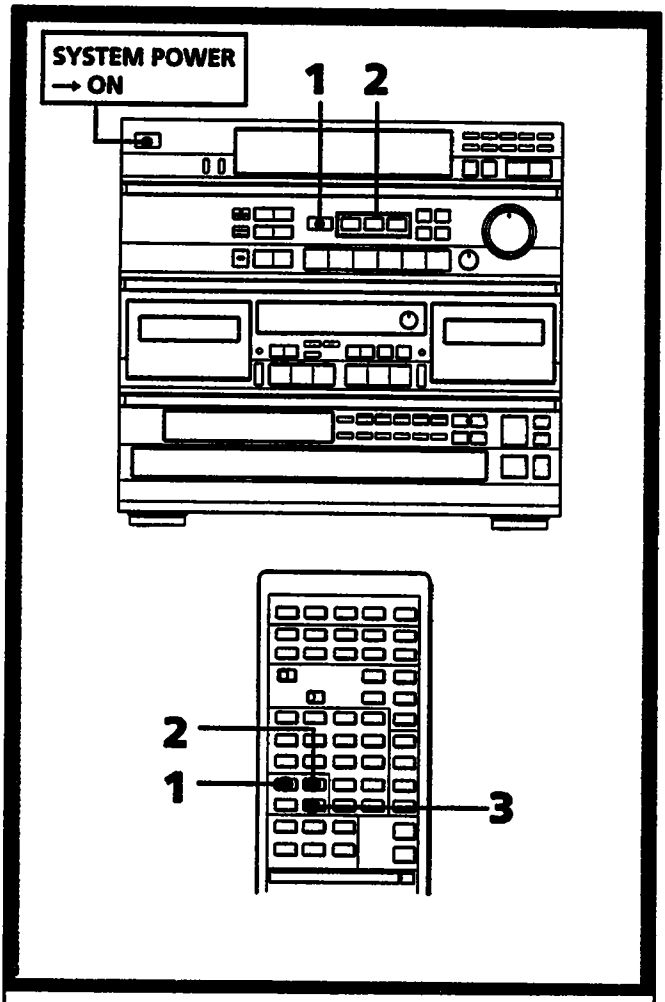
(When adjusting the MASTER VOLUME control on the unit, all speakers are adjusted simultaneously.)

- To adjust the center level or rear level, TREBLE/CENTER –/+ or BASS/REAR –/+ on the main unit can also be used.

6 **After adjusting, press T.TONE to turn off the test tone.**
"TEST TONE" disappears.

Adjusting the Delay Time of the Rear Speakers

The delay time is a time between the surround sound from the front and that from rear speakers. The delay time can be selected among 15 ms, 20 ms and 30 ms.
The delay time can be set in each surround mode (DOLBY, HALL, SIMULATED). (see page 12.)



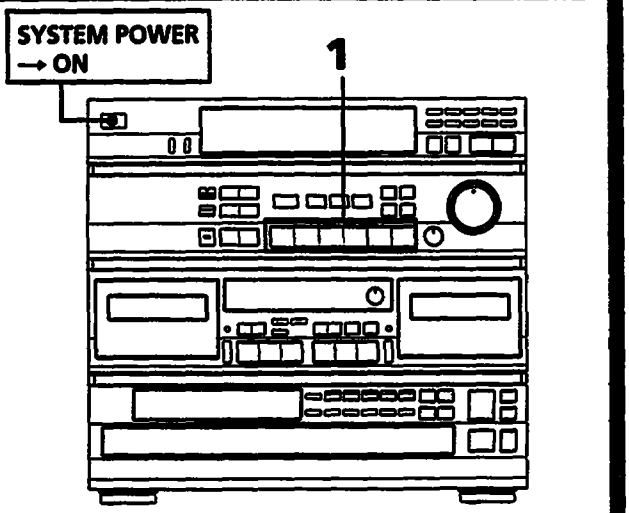
1 **Press SURROUND ON/OFF to ON.**
"SURROUND ON" appears on the display.

2 **Press the desired SURROUND MODE.**

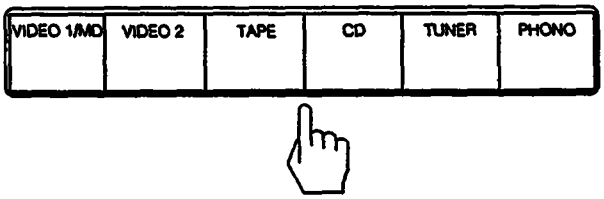
3 **Press DELAY on the remote commander to adjust the delay time.**
"DELAY TIME" and the selected delay time appear on the display.

To turn off the surround effect
Press SURROUND ON/OFF to OFF.
The sound without surround effect will resume.

Selecting a Program Source



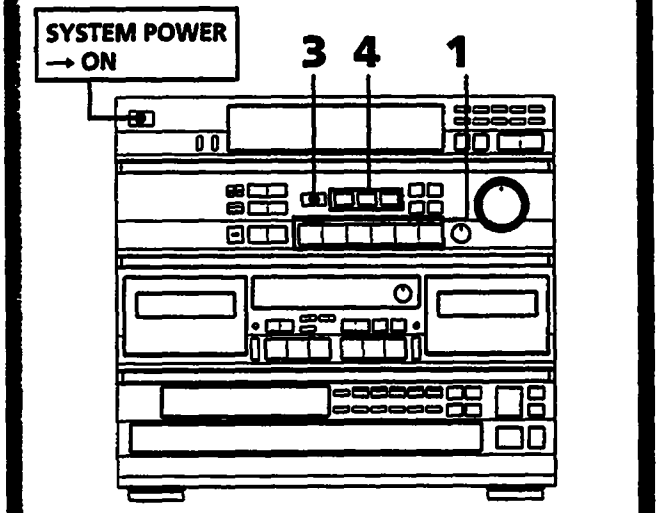
1 Select the program source.
The corresponding function name appears on the display. (However, only VIDEO 1 appears on the display when VIDEO 1/MD is selected.)



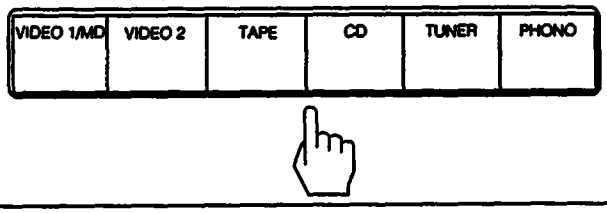
	Function selector to be pressed
Phono record	PHONO
Radio Broadcast	TUNER
Compact disc	CD
Taped program	TAPE
Video program /Mini Disc	VIDEO 1/MD or VIDEO 2 The MONITOR number on the display shows which video program source is selected.

2 Start the selected program.

Listening with the Surround Effect



1 Select the program source.
The corresponding function name appears on the display.



2 Start the selected program.

3 Press SURROUND ON/OFF to ON.
"SURROUND ON" appears on the display

4 Select the surround mode with the SURROUND MODE* buttons
The corresponding surround mode name appears on the display.

*** You can select the appropriate surround mode among the following modes.**

DOLBY** (Dolby Surround): Expands sound just like listening to it in a movie theater.

HALL (Hall surround): Provides reverberation effect that is produced in a concert hall.

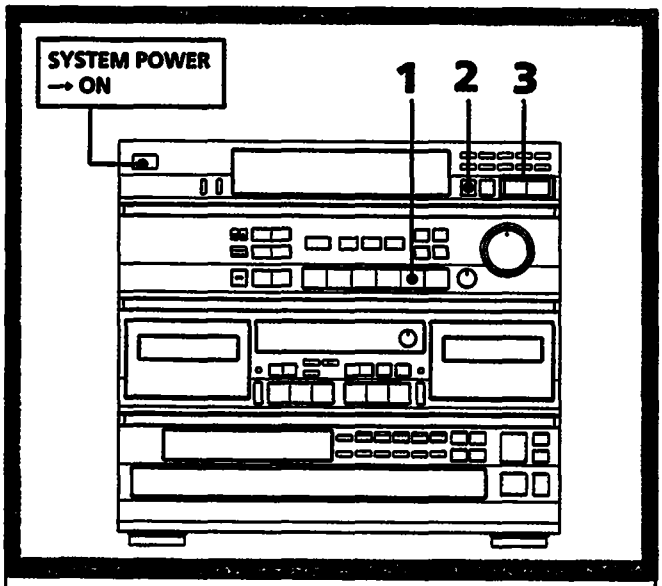
SIMULATED (Simulated surround): Gives a simulated stereo effect to monaural sound.

** Manufactured under license from Dolby Laboratories Licensing Corporation. Additionally licensed under one or more of the following patents: U.S. number 3,959,590: Canadian numbers 1,004,603 and 1,037,877. "Dolby", "Pro Logic" and the double-D symbol ⊡ are trademarks of Dolby Laboratories Licensing Corporation.

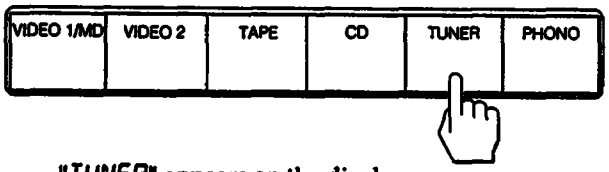
Note
No sound will be heard from the rear speakers, unless the SURROUND ON/OFF button is set to ON.

Receiving Broadcasts

This section describes about the various convenient ways of tuning.
Before reception, be sure to connect the supplied AM and FM antenna.

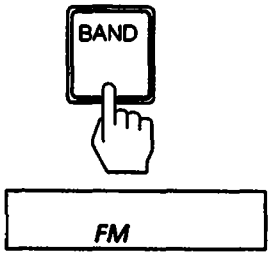


1 **Press TUNER.**



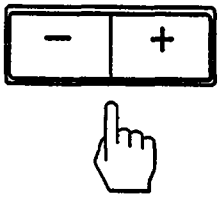
"*TUNER*" appears on the display.
The CD section is automatically turned off in the TUNER mode.

2 **Press BAND to select FM or AM.**



3 **Press DUAL MODE TUNING – or +.**

For a lower frequency **For a higher frequency**



- Tuning in automatically
  Keep pressing DUAL MODE TUNING – or + for about 1 second.
  When a station is received, the automatic tuning stops.

To stop automatic tuning
Press DUAL MODE TUNING – or +.

- Tuning in manually
  Press DUAL MODE TUNING – or + to select the station.

4 **Repeat step 3 until the desired station is received.**

Indicators in the display
- "TUNED" appears when a station is tuned in.
- "STEREO" appears when an FM stereo program of sufficient signal strength is received.

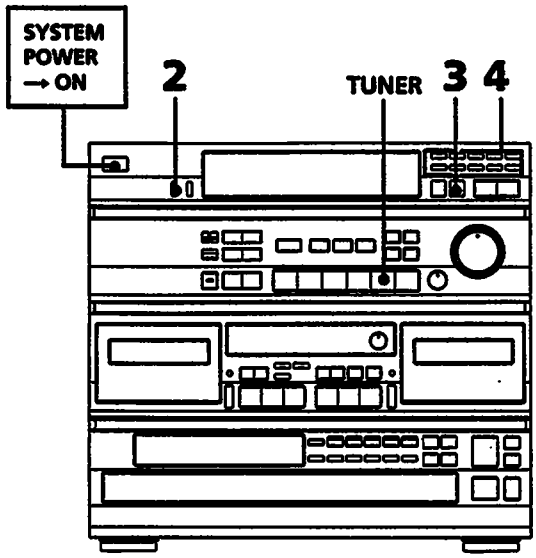
To change the AM tuning interval
The AM tuning interval is preset at the factory to 10 kHz to match the frequency allocation system of your country. To change the interval to 9 kHz, proceed as follows.
1 Press SYSTEM POWER to turn on the unit.
2 Press TUNER.
3 Set the BAND selector to AM.
4 Press SYSTEM POWER to turn the unit off.
5 While pressing DUAL MODE TUNING +, press SYSTEM POWER to turn the unit on.
To reset the interval, follow the same procedure.

Note
When the interval is changed, all stored stations, the settings of SUPER WOOFER ON/OFF, SURROUND ON/OFF and BASS/TREBLE will be erased from the memory. After changing the interval, be sure to perform these settings again.

Receiving Broadcasts

Storing Station Frequencies into Memory

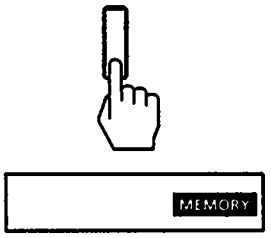
Up to 10 stations can be stored in any order for each memory page (A, B, C). Therefore, 30 stations can be stored in total.



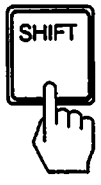
1 **Tune in a desired station. (See page 13.)**

2 **Press MEMORY.**

MEMORY

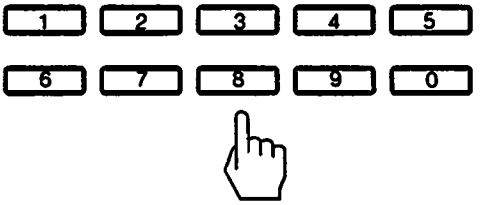


3 **While "MEMORY" is displayed, press SHIFT to select the memory page (A, B or C).**



Each time SHIFT is pressed, A, B or C is indicated cyclically.
The last memorized number with the selected page appears.

4 **While "MEMORY" is displayed, press the desired number.**



The memorized pages and numbers are displayed as: A – 1, B – 1, C – 1.

You can store a station only while "MEMORY" appears on the display
If "MEMORY" has gone off, press MEMORY again.

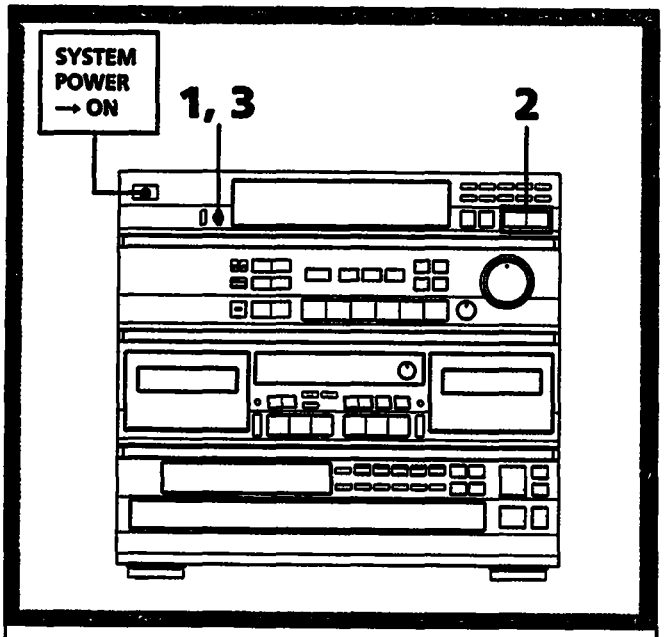
To cancel the storing operation after pressing SHIFT
Press MEMORY.

If you store a new station
Storing a new station will erase the previously stored one.

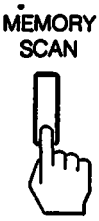
Tuning in a Stored Station

1 Press TUNER.
The CD section is automatically turned off in the TUNER mode.
2 Select the memory page with SHIFT.
3 Designate the number with the numeric buttons.

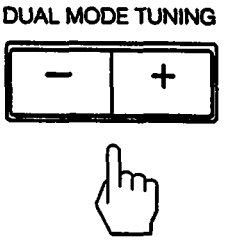
Scanning the Stored Station



1 **Press MEMORY SCAN.**



2 **Press DUAL MODE TUNING – or +.**

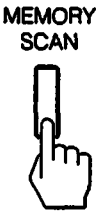


The stored stations are scanned in order of the code as follows.

A – 1 ⟷ A – 2 ..... A – 0 ⟷ B – 1 ..... B – 0
↕ ↕
C – 0 ⟷ C – 9 ..... C – 1

Every time a station is received, the broadcast will be heard for about 4 seconds.

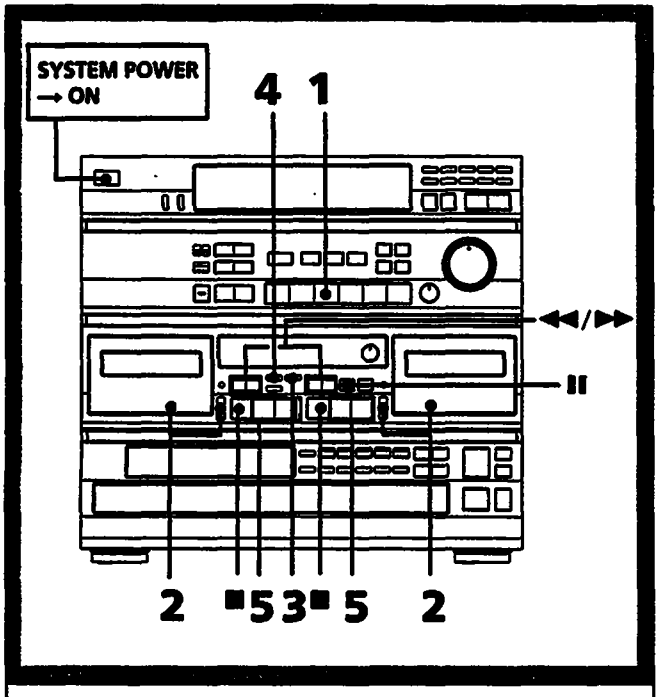
3 **Press MEMORY SCAN again as soon as the desired station is tuned in.**



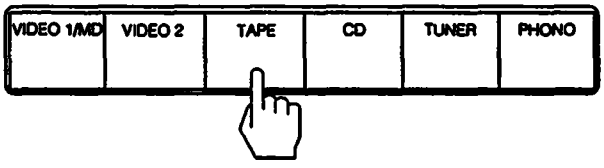
If a stored station cannot be tuned in by scanning
A stored station with a weak signal may be skipped.
In this case, tune in the station manually.

Playing Back Tapes (on either Deck A or B)

This section describes about a basic playback operation on either deck A or B.

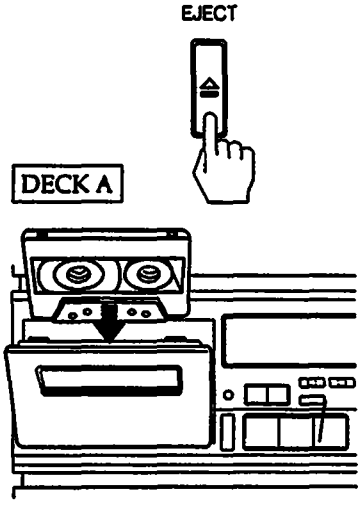


1 **Press TAPE.**

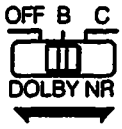


"*TAPE*" appears on the display.

2 **Press ⏏ to open the cassette compartment, insert the tape and close the cassette compartment.**



3 **Set DOLBY NR to the same position that was used when the cassette was recorded.**



4 **Set DIRECTION.**

To playback one side only	RELAY DIRECTION ◀
To playback both sides continuously*	RELAY DIRECTION ▶◀

*After playing back five times, playback automatically stops.

5 **Press ◁ or ▷ to start playback.**
To playback **from the front side,** press ▷.
To playback **from the reverse side,** press ◁.

The tape direction indicator lights up to show the side you are listening.

To stop playback, rewinding or fast forwarding, press ■.
To pause, press **II**.
To resume playback, press **II**, ◁ or ▷.
To fastwind a tape rightward, press ▶▶.
To fastwind a tape leftward, press ◀◀.

Notes

- During playback or recording on a deck, do not operate the other deck. (When both decks A and B are in playback mode, only playback from deck A will be audible.)
- Before turning the power off, be sure to stop playback or recording by pressing ■.

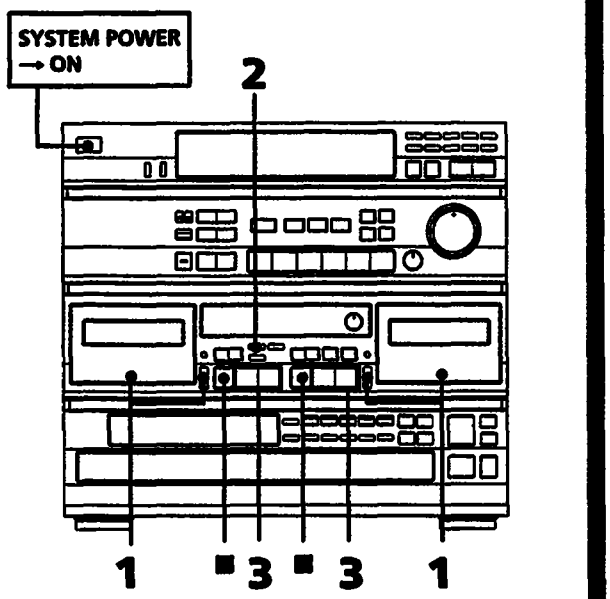
What is the Dolby NR* system?

Dolby NR (noise reduction) system reduces tape hiss noise in low-level, high-frequency signals. The system boosts these signals in recording and lowers them in playback.

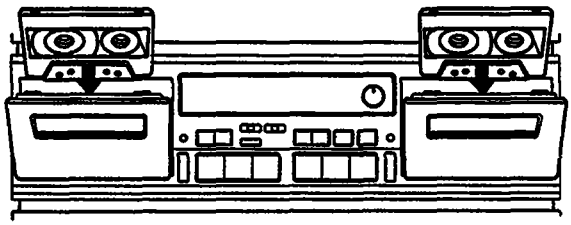
* Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"DOLBY" and the double-D symbol DD are trademarks of Dolby Laboratories Licensing Corporation.

Playing Back Both Decks in Succession – Relay Play

The Relay play function plays back cassettes in deck A and deck B continuously and inconsecutive order.



1 **Press ⏏ to open the cassette compartments, insert the tapes and close the cassette compartments.**



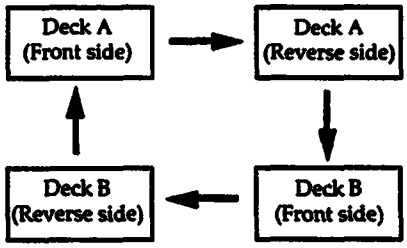
2 **Set DIRECTION to RELAY.**

3 **Press ◁ or ▷ to start playback of the cassette to be listened to first.**

To playback **from the front side,** press ▷.
To playback **from the reverse side,** press ◁.

To stop relay play
Press ■ of the deck playing.

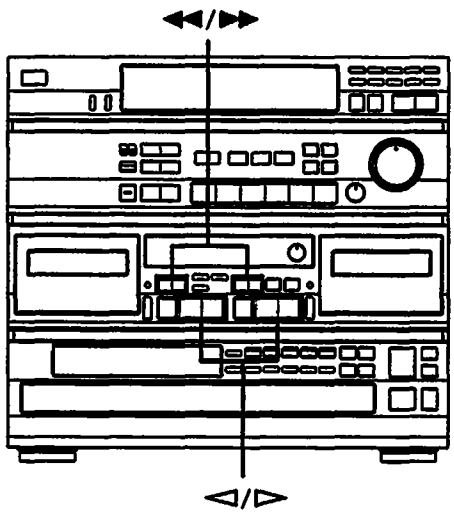
Playback sequence of Relay Play
Relay Play always follows the sequence below regardless of where playback starts.
After playing back five times, Relay Play automatically stops.



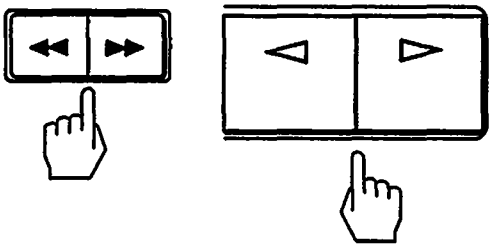
Playing back more than two cassettes in succession
Replacing cassettes that have finished playing with new ones allows you to playback two or more cassettes alternately on each deck.

Playing Back Automatically After Rewinding – Auto Play

The Auto Play function automatically starts playing back a cassette after fast winding it to the beginning.



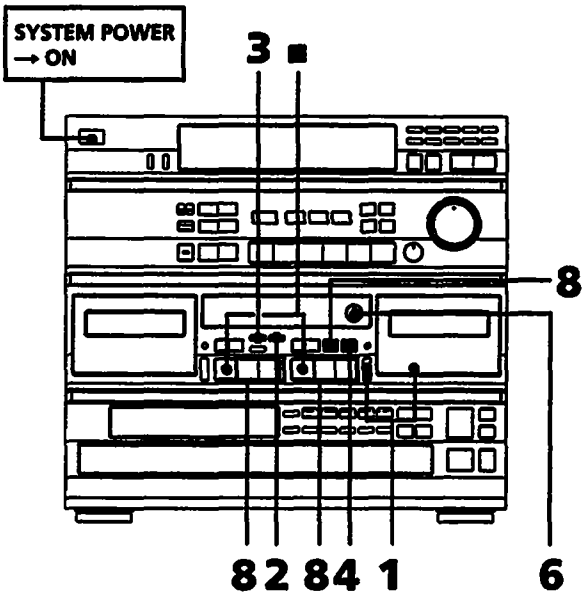
While pressing ◁ or ▷, press ◀◀ or ▶▶.



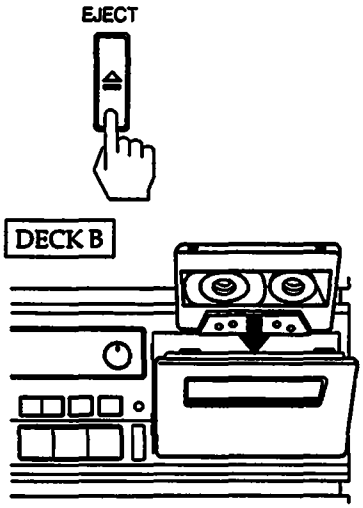
From the beginning of...	While pressing ...
front side	▷, press ◀◀.
reverse side	◁, press ▶▶.

Recording on Tapes (Deck B)

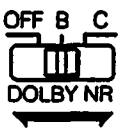
This section describes about the recording operation only on deck B.



1 **Press ≙ to open the cassette compartment, insert the blank tape and close the cassette compartment.**



2 **Set DOLBY NR.**



3 **Select the side(s) to be recorded.**

To record on one side	RELAY DIRECTION ←
To record on both sides	RELAY DIRECTION → ←

4 **Press ● to enter the recording pause mode.**

Note

The direction indicator for the side opposite the specified one will flash for three seconds to indicate that recording is possible on that side also. If, however, the tab for that side has been removed to prevent recording, the indicator will not flash.
If the tab has been removed from either side A or B, recording is impossible on the side(s).
To record a cassette for recording, cover the respective slot with tape. See "To prevent accidental erasure".

5 **Play the program source to be recorded.**

6 **Turn REC LEVEL to adjust the recording level.**

See "Adjusting Recording Level" on next page.

7 **Restart the program source, if required.**

8 **Start recording.**

- **To record on the front side of the cassette**
  When ▷ is on: Press ▷ once or ❚❚.
  When ◁ is on: Press ▷ twice.
- **To record on the reverse side of the cassette**
  When ◁ is on: Press ◁ once or ❚❚.
  When ▷ is on: Press ◁ twice.

Note

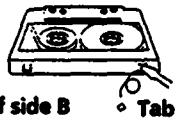
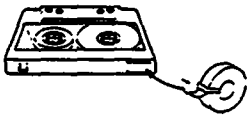
Pressing ◁ or ▷ twice will cause the unit first to change tape direction and then start recording in that direction.

To stop recording, press ■.

Notes

- The dubbing from deck A to B can be carried out only with the high speed dubbing function. (See page 20.)
- It is not recommended recording with Metal tapes.

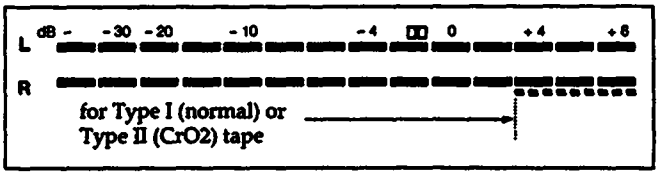
To prevent accidental erasure

To protect side A recording	To record onto side A
Break off the tab of side A. Side A  Tab of side B ◦ Tab of side A	Cover the opening with plastic tape. 

Adjusting the Recording Level

The optimum recording level, which differs according to the tape type, is indicated on the PEAK LEVEL METER for each tape type.
Adjust the REC LEVEL control as high as possible without exceeding the recommended range for the tape type being used.

PEAK LEVEL METER readings by tape type (Metal tapes can not be used with this unit.)
Recommended maximum PEAK LEVEL METER readings.

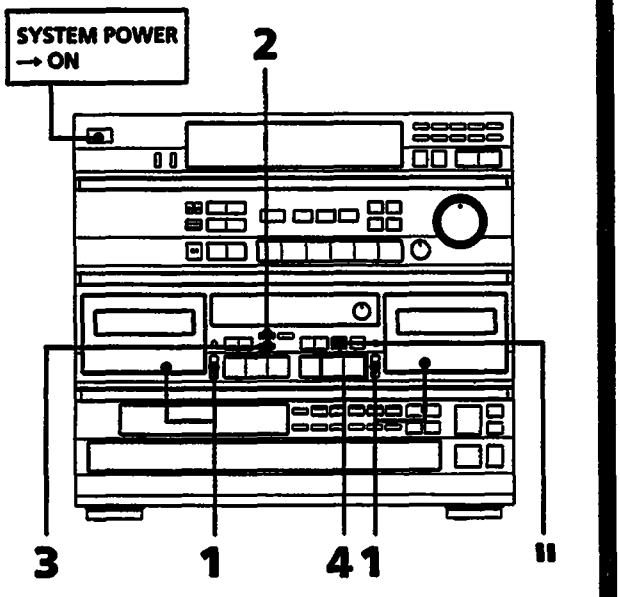


Tips on recording level adjustment

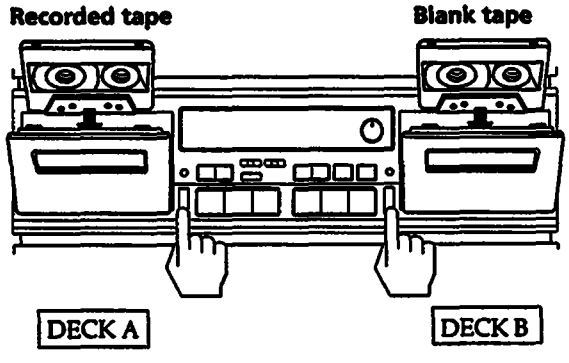
Setting the recording level too low will produce a hissing sound, while setting it too high will produce distortion. Generally, the optimum recording level for high and low frequencies is lower than that for middle frequencies. Therefore, when recording program sources with many high and low frequencies, you should set the level to a relatively low position. For even better results, check the recording results with your own ear.

Dubbing Tapes (from Deck A to B)

This section describes about the operation of the recording from deck A to B.



1 **Press ⏏ to open the cassette compartments, insert the tapes and close the cassette compartments.**



2 **Select the direction mode.**

One side	RELAY DIRECTION ←
Both sides	RELAY DIRECTION → ← Dubbing of the reverse side starts independently of deck A.
	RELAY DIRECTION → Dubbing of the reverse side starts simultaneously with deck A.

3 **Press HIGH SPEED DUBBING.**
The unit enters recording pause mode for high speed dubbing, the **II** and [REC] indicators light.
(Dubbing can not be carried out without pressing HIGH SPEED DUBBING.)

4 **Select the side on which to start dubbing.**

To dub **from the front side,** press ▷.
To dub **from the reverse side,** press ◁.

5 **Press II on deck B to start dubbing**
The recording pause mode will be canceled and dubbing starts.

The **II** indicator goes off.

To stop dubbing, press ■ on deck A or deck B.

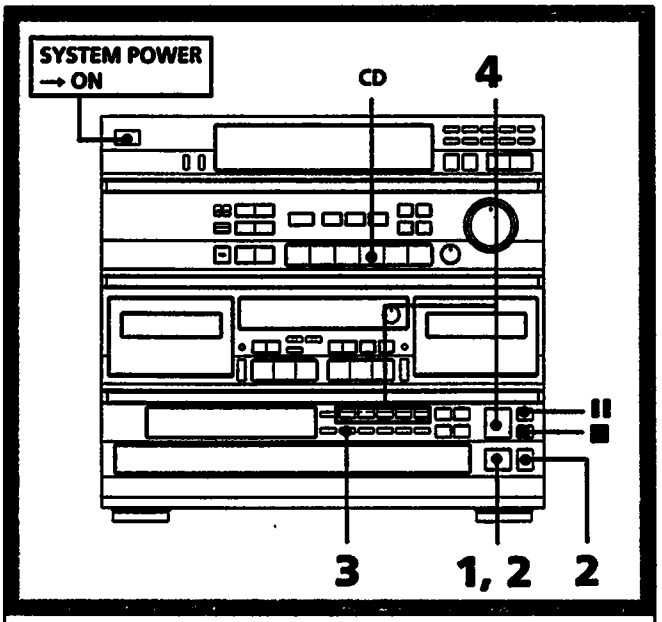
Notes

- The tape in deck B is automatically recorded with the same recording system as the original tape in deck A. So it is unnecessary to adjust the recording level and selecting the DOLBY NR.
- If the sound is affected by a television set during dubbing, turn off the set or move it away from the unit.

Playing the Discs – Continuous Play

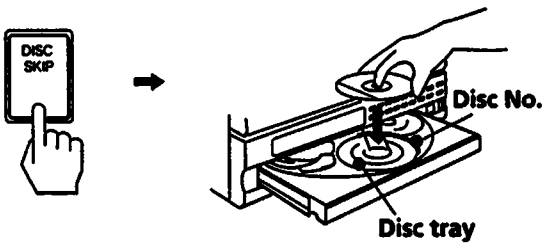
This section describes about the continuous play. This CD section can be played up to 5 discs, and you can choose to play a disc or all discs.

Before playing a disc, turn on the SYSTEM POWER and set the function selector to the CD mode.

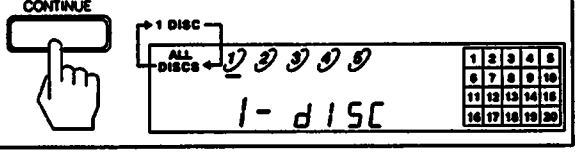


1 **Press ⏏ to open the disc table.**

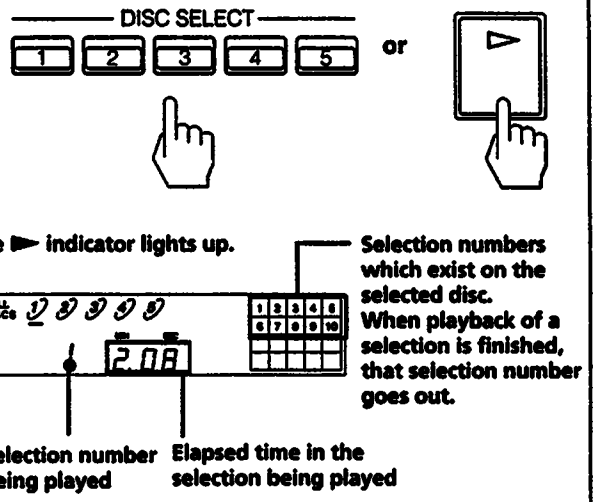
2 **Place a disc with the label side up.**
To play more than one disc, press DISC SKIP to turn the disc tray and place up to 5 discs.
After placing discs, press ⏏ to close the disc table.



3 **Press CONTINUE to choose whether to play one disc or all discs.**
Each time CONTINUE is pressed, "1 DISC" or "ALL DISCS" appears alternately.



4 **Press DISC SELECT or ▷ to start playback.**


DISC SELECT
1
2
3
4
5
or
The ▶ indicator lights up.
Selection numbers which exist on the selected disc. When playback of a selection is finished, that selection number goes out.
Selection number being played
Elapsed time in the selection being played

To stop play, press ■.
To stop play and open the tray, press ⏏.

To stop for a moment during play, press ❚❚.
Press ▷ or ❚❚ to resume playback.

Caution on adjusting volume
Do not turn up the volume while listening to a portion with very low level or no audio signals. Otherwise, the speakers may be damaged when a peak level portion is played.

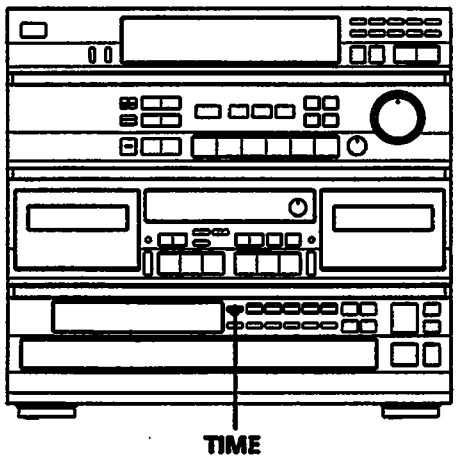
Notes

- The CD section is automatically turned off in the TUNER mode. However only OPEN/CLOSE and DISC SKIP on the CD section can be operated in any mode. This is useful when recording on tape from CDs.
- The disc number of an empty tray will be displayed until the empty tray is set to play. Once it is recognized as empty, it will disappear.

To play an 8 cm (3-inch) CD
Place it on the inner circle of the tray. If the disc is provided with an adaptor, first remove it. Do not put a normal CD (12 cm/5-inch) on top of an 8 cm CD.

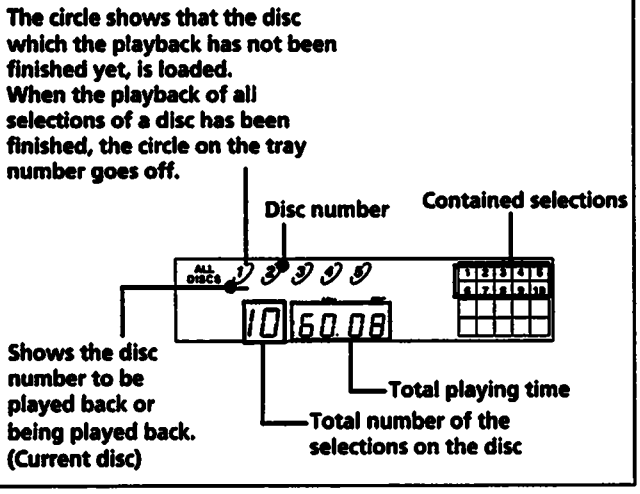
When there are no disc at all on the tray
"no d ISC" appears on the display.

Playing the Discs – Continuous Play

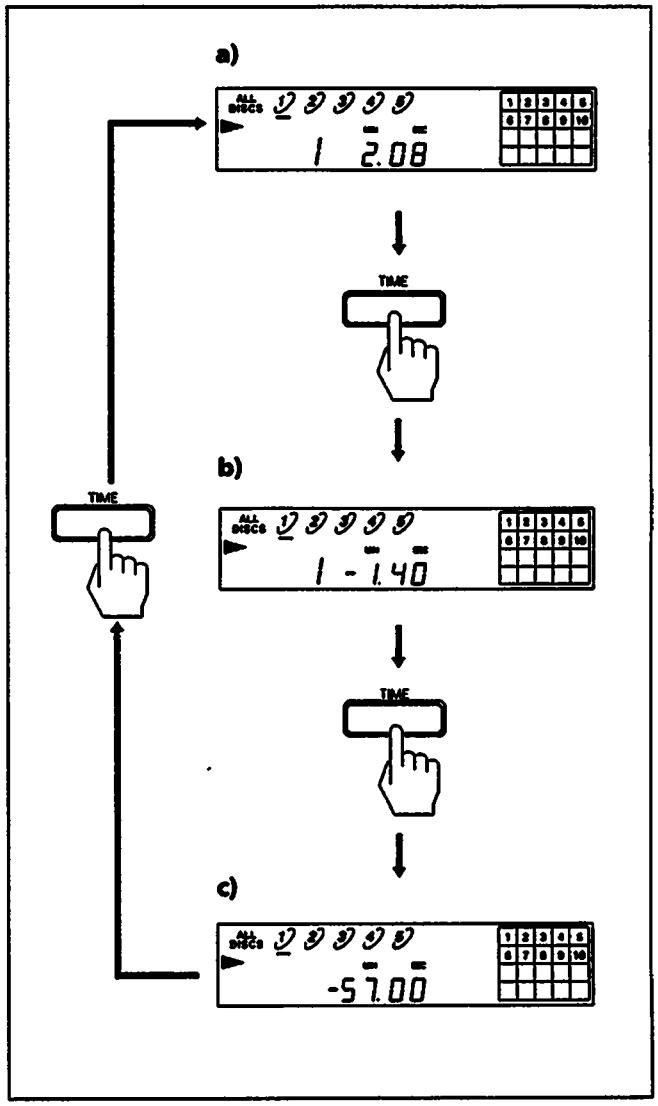


Information Display

When the disc tray is closed by pressing ⏏, the total number of selections and the total playing time of the disc to be played are displayed for a few seconds.
If you press TIME in stop mode, the total number of selections and the total playing time of the disc to be played can be displayed.

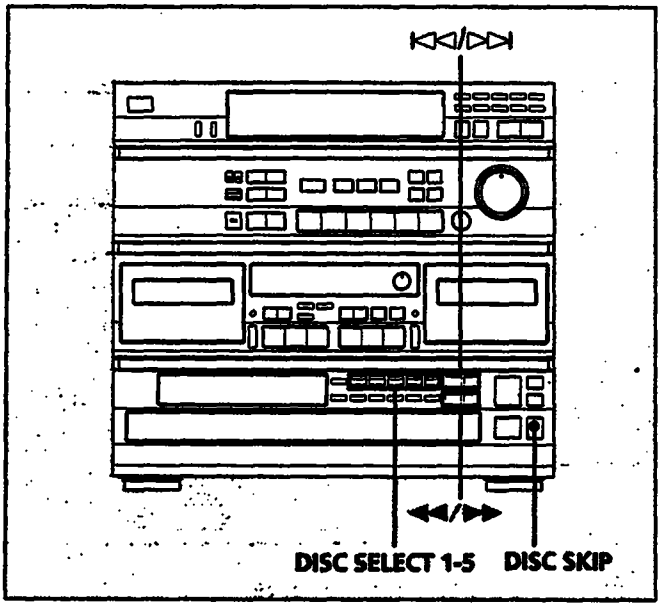

The circle shows that the disc which the playback has not been finished yet, is loaded.
When the playback of all selections of a disc has been finished, the circle on the tray number goes off.
Disc number
Contained selections
10 60.08
Shows the disc number to be played back or being played back. (Current disc)
Total playing time
Total number of the selections on the disc

Each time you press TIME during playback, the display changes as follows:



a) Elapsed time of the selection (automatically displayed when playback starts.)
b) Remaining time of the selection
"- -.- -" indicator will appear in the display instead of the actual time, if selection number 21 or higher is selected.
c) Remaining time of the disc

Note
Remaining time of the disc is only available during the continuous mode. It will not be displayed by pressing TIME during the program or shuffle mode.



Selecting a Desired Disc

By using DISC SELECT 1 - 5 or DISC SKIP during playback, you can locate the beginning of any disc.

To select a particular disc
Press the corresponding DISC SELECT 1 - 5.
To move to the disc tray next to the current one
Press DISC SKIP.

Locating a Particular Selection

Locating a selection in sequence
You can locate the beginning of a selection on the disc being played.

To locate the beginning of the selection being played
Press I◁◁.
To locate the beginning of the next selection
Press ▷▷I.

Press I◁◁ or ▷▷I until the desired selection is located.

Locating a Particular Point in a Selection

Locating a point in sequence (Manual Search)
You can locate a particular point during playback by monitoring the sound at high speed.

To go back at high speed
Keep ◀◀ pressed.
To go ahead at high speed
Keep ▶▶ pressed.

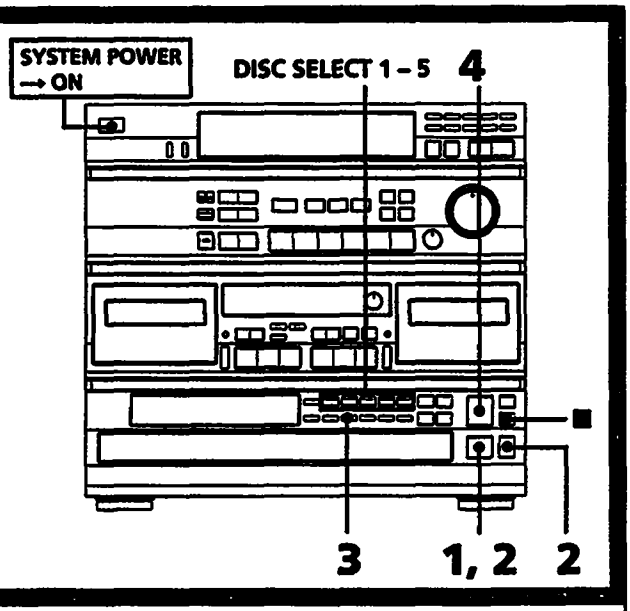
Release the button when you reach the desired point.

To locate at higher speed
Press ◀◀ or ▶▶ in the pause mode. Search speed will increase three times, but there will be no sound. Find the desired point by watching the time number on the display.

"⌐ ⌐" appears in the display
If you continuously press ▶▶ during play at the end of the disc, "⌐ ⌐" appears in the display. Press ◀◀ or I◁◁ to return to the normal display.

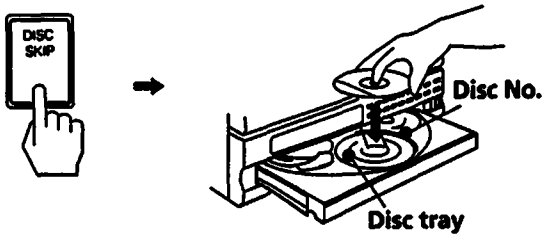
Playing in a Random Order – Shuffle Play

You can have the selections (up to 99) played in a random order.
The unit will play all the discs or just one disc you desire.

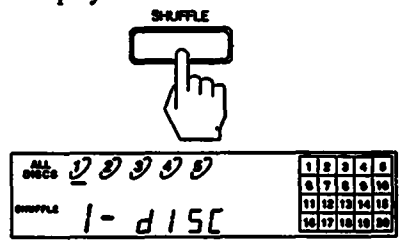


1 **Press ⏏ to open the disc table.**

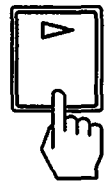
2 **Place a disc with the label side up.**
To play more than one disc, press DISC SKIP to turn the disc tray and place up to 5 discs.
After placing discs, press ⏏ to close the disc table.



3 **Press SHUFFLE to select the ALL DISCS or 1 DISC mode.**
ALL DISCS: The selections from all discs are played in a random order.
1 DISC: The selections from the current disc are played in a random order.



4 **Press ▷ to start playback.**



The ▶ indicator lights up.

Once a selection is played, it will not be played again until the playback in random order is completed.

To stop playback
Press ■.

To cancel shuffle play
Press CONTINUE to return to the continuous mode.

To change from program or continuous play to shuffle play
Press SHUFFLE during program or continuous play. The program mode or continuous mode will be cleared and shuffle play will start from the current selection being played.

While the unit is shuffling the selection
"[ ]" appears on the display.

Shuffle Play on Specified Disc – Select Shuffle Play

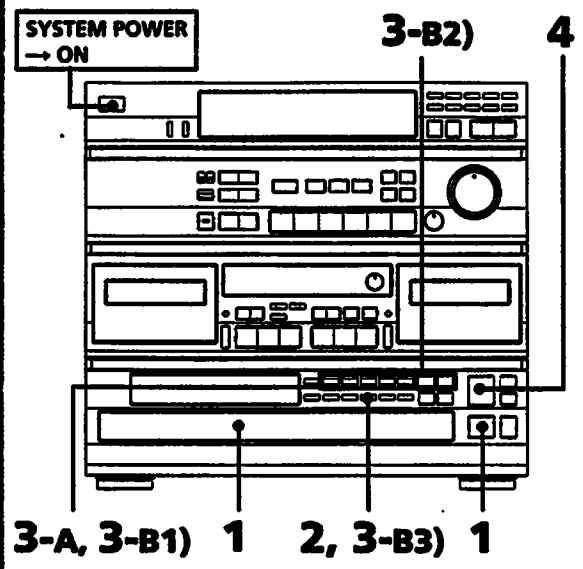
If you specify discs before or during play in ALL DISCS shuffle mode, only the selections on the specified discs will play in a random order.

To specify the discs
Press DISC SELECT 1 to 5 to specify the discs after choosing ALL DISCS mode. Semi - circles appear around the selected discs numbers to be played. To cancel the selected discs, press DISC SELECT 1 to 5 of selected discs numbers again.
Press ▷.
Select Shuffle Play starts.

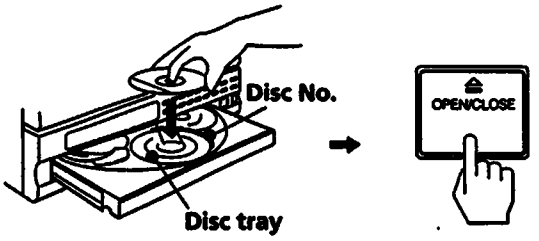
To return to all shuffle play
Press SHUFFLE twice.

Playing in a Desired Order – Program Play

You can make a program by designating up to 32 steps in the order you want them to be played. The unit will play the disc according to your program.
This function is very convenient for recording on the cassette tape.



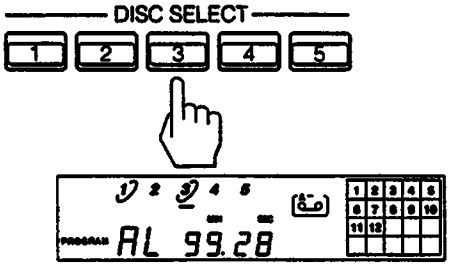
1 **Place discs with the label side up.**
After placing discs, press ⏏ to close the disc table.



2 **Press PROGRAM so that "PROGRAM" appears on the display.**

3-A **To program discs in the order you want to play.**

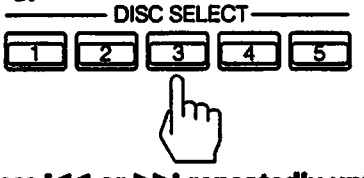
Press DISC SELECT 1 – 5 in the order you want to program.



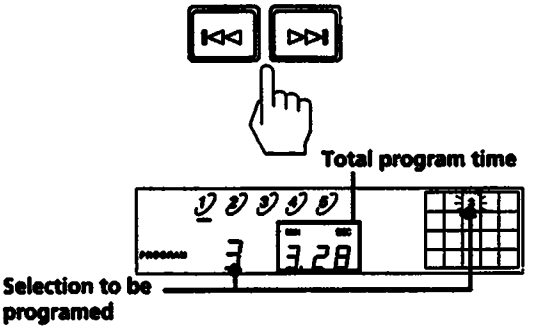
"AL" appears in the display.

3-B **To program selections on a disc in the order you want to play.**

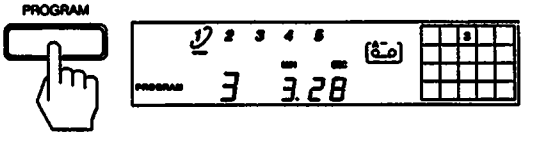
1) **Select the desired disc with DISC SELECT 1 – 5.**



2) **Press I◁◁ or ▷▷I repeatedly until the desired selection is located.**



3) **Press PROGRAM.**

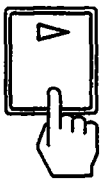


The selection is stored, and the blinking number in the display light up.

Repeat 2) and 3) to select another selection.
To program the selection(s) on another disc, repeat 1), 2) and 3).

Playing in a Desired Order – Program Play

4 Press ▷ to start playback.



The ▶ indicator lights up.

Skipping to the next selection programed
Press ▷▷| during playback.

Going back to the beginning of the selection being played
Press |◁◁ during playback.

To stop program play
Press ■. The last selection number programed will be displayed.
To resume playback, press ▷. Play begins from the beginning of the program.
You can play the same program repeatedly as long as you do not cancel program play or erase the program.

To program while observing the disc labels
You can program the selections with the disc table open.

To check the program contents
Press CHECK. Each time the button is pressed, the program contents are displayed in the programed order.

To cancel program play
Press CONTINUE and return to the continuous playback mode. The program will be erased.

To cancel all the selections programed
Press ■ to cancel in stop mode.
If the disc table is opened or the power is turned off, the program contents are also erased.

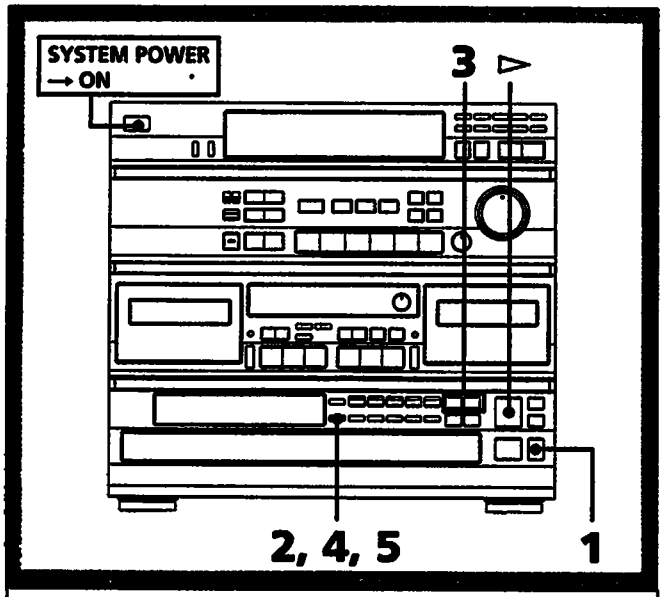
To program for recording
After steps 1 to 3-A or 3-B3), press II to insert a pause and program the selections for side B by performing step 3-A to 3-B3).

When the selections for side A have been played, the unit will pause. ("B" lights up.)
Set the tape to the beginning of side B, then press ▷ or II.
The selections for side B will start playback.

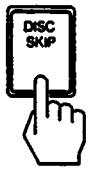
Notes
- The playing time for selection numbers higher than 20 will not be added into the total playing time.
- When selections have been programed for sides A and B, the display shows the selections programed for side B and the total playing time for side B in stop mode.

Designating the Total Playing Time – Time Edit

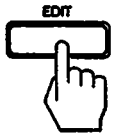
You can designate a time and the unit will make 2 different programs of selections each fitting within that period. Use this function by designating the length of your tape for editing both sides of a tape.



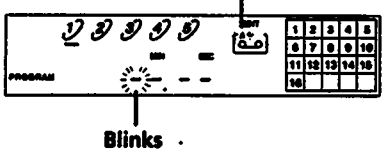
1 **Press DISC SKIP to select the disc to be played.**



2 **Press EDIT.**

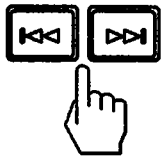


"EDIT" lights up and "A" blinks.

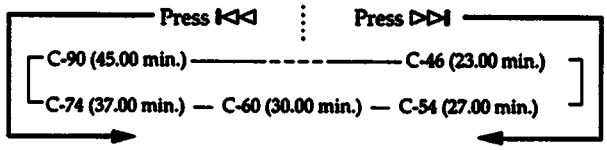


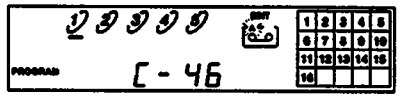
3 **Designate the length of one side of your tape.**

• To set the minute

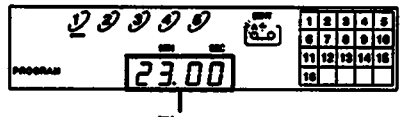


Each time ⏮/⏭ is pressed, the time changes as follows:

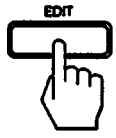




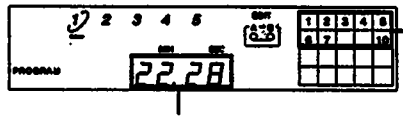
After 2 seconds



4 **Press EDIT.**



The program for side A is completed.



5 **Press EDIT once more, to make a program for the other side of your tape.**

Designating the Total Playing Time – Time Edit

To play the program
Press ▷.
The selections for side A will be played and then the unit will pause. "B" lights up in the tape side indicator. Set the tape to the beginning of side B, then press ▷ or ▮▮.
The selections for side B will be played.

Note
Playback can be performed when "EDIT" is displayed.

To stop playback
Press ■.
You can play the same program repeatedly as long as you do not cancel time edit or erase the program.

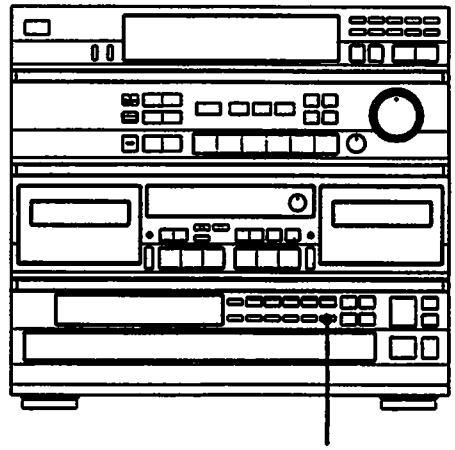
To cancel time edit
Press CONTINUE and return to the continuous playing mode.
The program will be erased.

To erase the entire program
Press ■ once during stop; twice during playback.
The program is also erased, when you turn off the unit or open the disc table.

To include desired selections in the program
1 Make your own program of the desired selections. See page 25 for instructions.
2 Follow the procedures as shown on the preceding page. Just designate the length of your tape, and you need not subtract the playing time of your program. The unit will place your selections at the beginning of its program and add other selections to fit the remaining time.

Playing Repeatedly – Repeat Play

Repeat play allows you to repeat selections in any play mode. You can repeat all discs, only specified discs, one selection, or programmed or reshuffled selections.



Press REPEAT before or during playback.

In continuous mode:
To repeat all selections on a disc (1 DISC mode) or all selections on all discs (ALL DISCS mode), press REPEAT so that "REPEAT" appears on the display.
To repeat one selection, press REPEAT so that "REPEAT 1" appears on the display.

In program mode or shuffle mode:
Only the "REPEAT" function is available.
The entire program or all selections shuffled in random order will be played repeatedly by pressing REPEAT.

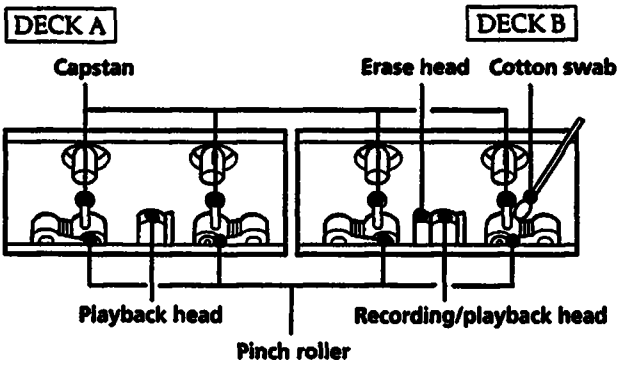
To cancel repeat play
Press REPEAT until "REPEAT" or "REPEAT 1" disappears.

Maintenance

Cleaning the Heads and Tape Path

Clean after every 10 hours of operation and before recording for optimum record/playback quality.

1 Press ⏏.
2 Slightly moisten the tip of a cotton swab with cleaning fluid or alcohol.
3 Wipe heads, pinch rollers and capstans.



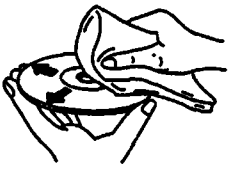
Do not insert a cassette until cleaned areas are completely dry.

Demagnetizing the Heads

After 20 to 30 hours of use, it is necessary to remove residual magnetism built up on the head. Turn off the power and demagnetize heads with any commercially available demagnetizer.

Cleaning discs

Before playing, clean the disc with the cleaning cloth. Wipe the disc from the center out.



Do not use solvents such as benzine, thinner, commercially available cleaners or anti-static spray intended for analog discs.

Notes on handling discs

- To keep the disc clean, handle the disc by its edge. Do not touch the surface.
- Do not stick paper or tape on the disc.

- Do not expose the disc to direct sunlight or heat sources such as hot air ducts, or leave it in a car parked in direct sunlight as temperature may rise considerably.
- After playing, store the disc in its case.

Specifications

Amplifier

Frequency response: PHONO: RIAA curve
VIDEO 1/MD, VIDEO 2: 40 Hz – 50 kHz ±3 dB

Audio section
Input

	Sensitivity	Impedance
PHONO	2.5 mV	50 kilohms
VIDEO 1/MD **VIDEO 2**	250 mV	50 kilohms

Output: VIDEO 1/MD: Voltage 250 mV
Impedance 1 kilohm

Tone buttons: BASS: Boost/Cut range: ±7 dB (100 Hz)
TREBLE: Boost/Cut range: ±7 dB (10 kHz)

Video section
Video input/output
Permissible signal input level: VIDEO 1, 2: 1.5 Vp – p
Output signal level: VIDEO 1, MONITOR: 1.5 Vp – p
Impedance (output): 75 ohms unbalanced, negative sync

Tuner

System: FM stereo, FM/AM superheterodyne tuner
Quartz-locked PLL digital synthesizer system

FM tuner section
Tuning range: 87.5 – 108 MHz
Antenna terminals: 75 ohms unbalanced
300 ohms balanced
Intermediate frequency: 10.7 MHz
Sensitivity (at 50 dB quieting)
22.1 dBf, 7 µV (mono)
42.1 dBf, 70 µV (stereo)
Usable sensitivity: 19.5 dBf, 5 µV (IHF)
Signal-to-noise ratio (at 75 kHz deviation)
80 dB (mono)
75 dB (stereo)
Separation: 35 dB at 1 kHz
Selectivity: 55 dB at 400 kHz
Harmonic distortion: 0.3% (mono) at 1 kHz
0.5% (stereo) at 1 kHz

AM tuner section
Tuning range: Model for U.S.A.
530 – 1,710 kHz (10 kHz)
531 – 1,710 kHz (9 kHz)
Model for other countries
531 – 1,710 kHz (9 kHz)
530 – 1,710 kHz (10 kHz)
Antenna: AM loop antenna, External antenna terminals
Intermediate frequency: 450 kHz
Usable sensitivity: AM loop antenna: 500 µV/m (1,000 kHz)
Signal-to-noise ratio: 54 dB
Harmonic distortion: 0.5%
Selectivity: 38 dB (10 kHz)

Tape Deck

System: 4-track 2-channel stereo
Frequency response (DOLBY NR OFF)
With TYPE II cassette (Sony UCX-S): 30 – 14,000 Hz (±3 dB)
With TYPE I cassette (Sony HF-S): 30 – 13,000 Hz (±3 dB)
Wow and flutter: 0.08% WRMS (NAB)

Compact Disc

System: Compact disc digital audio system
Laser: Semiconductor laser
Wavelength: 780-790 nm
Frequency response: 2 Hz – 20 kHz (±1.5 dB)
Harmonic distortion: Less than 0.03 % (1 kHz)

General

Dimensions: Approx. 430 x 410 x 400 mm (w/h/d) ($17 \times 16^{3}/_{16} \times 15^{3}/_{4}$ inches) (including projecting parts and controls)
Mass: Approx. 9.5 kg (20 lb 15 oz) net
Accessories supplied:
AM loop antenna (1)
FM wire antenna (1)
Remote Commander RM-U541 (1)
Sony batteries SUM-3(NS) (2)
System control cord (1)
Audio connecting cord (3)
Feet (4)

Design and specifications are subject to change without notice.

Troubleshooting

Before going through the check list below, first refer back to the connection and operating procedures.
Should any problem persist after you have made these checks, consult your nearest Sony dealer.

Tuner Operation	
STEREO indicator blinks.	• A very weak FM station or a noisy FM program is received. → Adjust the antenna or connect an external FM antenna.
Severe hum or noise.	• The signal strength is too weak. → Adjust the antenna, connect an external antenna or connect the ground wire.

Cassette Deck Operation	
The ● button does not activate.	• No tape in the cassette compartment. • The tab has been removed from the tape. (See page 19.) → Cover the opening with plastic tape.
Function buttons do not activate.	• Cassette compartment is not fully closed.
Recording or playback cannot be made, or there is decrease in sound level.	• Recording/playback and erase heads are either dirty or magnetized. → Clean or demagnetize the heads. (See page 29.)
Excessive wow, flutter or dropout.	• Capstan or pinch roller is dirty. (See page 29.)
Incomplete erasure.	• Erase head is dirty. (See page 29.)
Unbalanced tone in high frequencies.	• Improper setting of DOLBY NR. → When playing back, set the switch to the same position used in recording.

Compact Disc Operation	
Remote commander does not operate the unit.	• No disc in the CD section. • The unit is in the pause mode. → Press ▷ or ▮▮ to release pause. • Moisture condensation. → Leave the unit turned on for about an hour. • The disc is set upside down. → Set the disc with the label side up. • The disc is tilted. → Set the disc correctly. • The disc is extremely dirty.
Any operation is not possible.	• The internal control program may not run. → Turn off the power and turn it on again.

Troubleshooting

Super Woofer Operation	
Vibration sounds from furniture, walls or glasses in the room are heard.	• These vibration sounds are produced when the super woofer transmits the vibration to the objects. → Reduce the volume level or place the vibrating objects away from the super woofer.
SUPER WOOFER can not be turned ON.	• SUPER WOOFER automatically turned OFF when the function is set to PHONO.

General	
The unit is not turned on.	• Check if any button on the front panel has been pressed before turning on SYSTEM POWER.
No audio.	• Check the system control cord connection and the power cord connection of the super woofer. • Check the connections. (See pages 5 to 6.) • Adjust volume.
No audio from one channel.	• Check the speaker cord or connecting cord connection. (See pages 5 to 6.) • The BALANCE control is fully turned to left or right. → Adjust the BALANCE control to the center position. (See page 8.)
Noise when TV is turned on.	• Move the TV away from the audio system.
Lack of bass sound or obscure instrument position.	• Check the connection between the super woofer and speakers. • Adjust the PHASE.
Severe hum or noise	• Keep the audio components further away from the TV. • Keep the connecting cords away from transformer, motors, fluorescent lights, or computers. • Fully insert connecting cord plugs. • Clean any dirty plugs and jacks with a cloth lightly moistened with alcohol.

Sony Corporation Printed in Indonesia